February 18, 1955

Dr, M. Stahmann
Biochemistry Dept.

Dear Mark:

You asked me to comment on the potential application of an improved electron microscope in our work.

We have during the past four years had an intermittent need for this kind of technique: in the examination of bacteriophage in lysogenic systems; in the identification of "FA" with phage in genetic transduction in Salmonella; in the visualization of flagella in Salmonella and extracts from them; and currently in the examination of conjugating bacteria in Escherichia coli sexuality.

Although our present use of the "EM" may run to only five or ten hours a year*, I anticipate that we will be more and more dependent on the technique as time goes on. We are planning a study that aims to discern the fragment of bacterial-genetic material that is carried by phage in transduction, and this, if it is possible at all, will require the best equipment obtainable. Our current study of E. coli conjugation is also technically demanding.

I should say that my own program, and the whole campus is exceptionally fortunate in having the EM installation, and that there would be few more worthwhile investments than in its improvement. Let me take the occasion to record, too, the fact that Dr. Kaesberg's sympathetic copperation and intelligent interest have been greatly appreciated in the studies we have made so far.

Yours sincerely,

Joshua Lederberg
Professor of Genetics

*this was a bad offhand guess. We have been running closer to twenty or thirty, and will certainly do much more this coming year.